

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1330-04
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA Wilfred Kaiser, STPA Terry Smith, ALL-TECH
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DATE	5 th June, 2009	STPA NO.	CO2-NSL-0068

**SUBJECT: 4th June, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Tar Cell, Sysco Site
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 4th of June, 2009. Donald MacIsaac and Shaun Dove of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Partly cloudy
- Temperature: approximately 20°C
- Wind Direction: Northeast to Southwest

Comments: *ALL-TECH was on-Site at 0630 and sampling began as soon as there was site activity. Air monitoring was performed during SLR's construction activities.*

All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were below the established Site Action Level for this parameter of 0.66 ppm. Each measurement is the average of a 15 minute sample. A minimum of 2 samples were taken downwind and 1 sample upwind every hour. All measurements were found to be below the detection limit of the instrument. Levels above detection limit will be noted in the table below.

Due to operational criteria, during periods of precipitation (snow and rain) and high humidity, TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Donald MacIsaac and reviewed by Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



Dianne Theriault, B.Tech
Environmental Technologist
ALL-TECH Environmental Services Cape Breton Ltd.

Copied via e-mail:

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Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Tar Cell, Sysco Site
4th June, 2009

Sample No. & Air Monitoring Location	Time of Day	PM₁₀ Action Level (µg/m³)	Average Result (µg/m³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 30m East of new truck scale (N 46°09.343' W 060°11.715')	0700	155	53	Northeast	Upwind	Background	No observations seen to affect sampling integrity
2 100m Northwest of railway building (N 46°08.918' W 060°11.211')	0700	155	9	Northeast	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
3 100m Northwest of railway building (N 46°08.918' W 060°11.211')	0720	155	8	Northeast	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
4 110m Southeast of railway building (N46°08.923' W 060°11.713')	0800	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
5 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	0800	155	9	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
6 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	0815	155	11	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
7 110m Southeast of railway building (N46°08.923' W 060°11.713')	0900	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	0900	155	14	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
9 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	0925	155	11	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
10 110m Southeast of railway building (N46°08.923' W 060°11.713')	1000	155	13	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1000	155	14	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
12 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1035	155	9	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
13 110m Southeast of railway building (N 46°08.923' W 060°11.713')	1100	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
14 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1100	155	18	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
15 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1130	155	9	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
16 110m Southeast of railway building (N 46°08.923' W 060°11.713')	1200	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1200	155	9	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1230	155	11	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
19 110m Southeast of railway building (N 46°08.923' W 060°11.713')	1300	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1300	155	10	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
21 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1330	155	11	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
22 110m Southeast of railway building (N 46°08.923' W 060°11.713')	1400	155	5	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1400	155	14	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
24 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1430	155	15	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
25 110m Southeast of railway building (N 46°08.923' W 060°11.713')	1500	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1500	155	15	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 20m Northwest of new truck scale (N 46°09.340' W 060°11.681'))	1525	155	20	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
28 110m Southeast of railway building (N 46°08.923' W 060°11.713')	1600	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
29 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1600	155	22	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
30 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1630	155	53	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
31 110m Southeast of railway building (N 46°08.923' W 060°11.713')	1700	155	4	Southwest	Upwind	Background	No observations seen to affect sampling integrity
32 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1700	155	32	Southwest	Downwind	Excavators and trucks moving materials	No observations seen to affect sampling integrity
33 20m Northwest of new truck scale (N 46°09.340' W 060°11.681')	1740	155	15	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity

Notes: Air sample duration for each monitoring event was 15 minutes.

Comparison of Downwind Daily Results for Dust Budget

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
100m Northwest of railway building	0700 to 0759	9	990
20m Northwest of new truck scale	0800 to 0859	19	990
20m Northwest of new truck scale	0900 to 0959	32	990
20m Northwest of new truck scale	1000 to 1059	44	990
20m Northwest of new truck scale	1100 to 1159	58	990
20m Northwest of new truck scale	1200 to 1259	68	990
20m Northwest of new truck scale	1300 to 1359	79	990
20m Northwest of new truck scale	1400 to 1459	94	990
20m Northwest of new truck scale	1500 to 1559	112	990
20m Northwest of new truck scale	1600 to 1659	150	990
20m Northwest of new truck scale	1700 to 1759	173	990

VOC Monitoring

Monitoring Method	Yes	No
Sustained Odours Observed		•
P.I.D. Required	•	